I CLAIM:

1. A point to multipoint communication system for providing wireless communication between a hub and plural remote nodes, wherein said communication system is adapted to provide plural levels of communication capacity between the hub and the plural remote nodes, said communication system comprising:

said plural nodes, each comprising:

a remote wireless communication link interface for providing wireless communication with said hub; and

an interface operatively connected to one or more remote computer systems;

said hub comprising:

a plurality of wireless communication link interfaces for providing wireless communication with said plural nodes;

a first communication signal processor operatively connected to said plurality of wireless communication link interfaces;

a communication controller operatively connected to an external computer system;

a bus structure operatively connected to said first communication signal processor and to said communication controller, wherein said bus structure is adapted to accept plural communication signal processors and operatively connect said plural communication signal processors to said communication controller to thereby provide plural levels of communication capacity between the hub and the plural nodes.

2. The communication system of Claim 1 wherein said plurality of wireless communication link interfaces are adapted to be interchangeably connected to any one of a plurality of communication signal processors.

3. The communication system of Claim 2 further comprising a second communication signal processor operatively connected to at least one of the plurality of wireless communication link interfaces and to said bus structure wherein said at least one of the plurality of wireless communication link interfaces is disconnected from said first communication signal processor so as to be connected to said second communication signal processor.

4. The communication system of Claim 3 wherein the addition of said second communication signal processor substantially doubles the communication capacity between the hub and the plural nodes.

5. The communication system of Claim 3 wherein each of the plurality of wireless communication link interfaces establishes a wireless communication link with at least a one of the plural nodes whereby each one of said wireless communication links is substantially independent of the others of said wireless communication links.

6. The communication system of Claim 5 wherein the first and second communication signal processors and each of the plurality of wireless communication link interfaces operate using a common intermediate frequency.

7. The communication system of Claim 5 wherein the communication controller is capable of directing information from the external computer system to certain ones of the plural nodes by directing the information to the communication signal processors associated with the wireless communication link between the hub and said certain ones of the plural nodes.

8. The communication system of Claim 7 wherein said external computer is selected from the group consisting of: a public switched telephone network, a private network, a private branch exchange, a router, a fiber optic network, and the internet.

9. The communication system of Claim 1 wherein said first communication signal processor comprises a modem.

10. The communication system of Claim 9 wherein said modem is a multiport modem.

11. The communication system of Claim 9 wherein said modem is capable of providing communications at multiple levels of information density.

12. The communication system of Claim 11 wherein the communication controller controls the level of information density.

13. The communication system of Claim 1 wherein each one of said plurality of wireless communication link interfaces comprises a radio including an antenna with a predetermined beamwidth to provide communications to a predetermined sector.

14. The communication system of Claim 13 wherein said radios operate using a common intermediate frequency and ones of said radios operate using a radio frequency that is different than the radio frequency of the others of said radios.

15. The communication system of Claim 13 wherein said radios operate in the millimeter frequency range.

16. The communication system of Claim 15 wherein ones of said predetermined sectors operate using a communication channel that is different than the communication channels of the others of said predetermined sectors wherein said communication channels comprise a forward portion and a reverse portion.

17. The communication system of Claim 16 wherein at least one of the communication channels is a code division multiple access channel.

18. The communication system of Claim 16 wherein at least one of the communication channels is a frequency division multiple access channel.

19. The communication system of Claim 16 wherein at least one of the communication channels is a time division multiple access channel.

20. The communication system of Claim 19 wherein the time division multiple access channel is time division duplexed.

21. The communication system of Claim 20 wherein the time division duplexing is asymmetric.

22. The communication system of Claim 21 wherein said asymmetry is dynamically adjustable as a function of the ratio of the forward portion and the reverse portion of the communication channel.

23. The communication system of Claim 2 further comprising a plurality of communication signal processors whereby each one of the plurality of communication signal processors is operatively connected to:

a separate one of said plurality of wireless communication link interfaces; and

the bus structure.

24. The communication system of Claim 23 wherein each of the plurality of wireless communication link interfaces establishes a wireless communication link with at least a one of the plural nodes whereby each one of said wireless communication links is substantially independent of the others of said wireless communication links.

25. The communication system of Claim 24 further comprising an additional communication signal processor operatively connected to the bus structure and to a plurality of wireless communication link interfaces to thereby establish a redundant wireless communication link.

26. The communication system of Claim 1 further comprising multiple hubs.

27. In a point-to-multipoint adaptive time division duplex system for broadband short distance radio communication in the millimeter frequency range from one computer network to another computer network comprising:

a hub geographically located in a predetermined location and adapted to be operatively connected to a computer network for the communication of bursty data between the computer network and the hub, said hub comprising:

a plurality of wireless communication link interfaces for providing wireless communication with said plural nodes;

a first communication signal processor operatively connected to said plurality of wireless communication link interfaces; and

a communication controller operatively connected to said first communication signal processor and to said computer network;

and

a plurality of nodes each geographically spaced from said hub and adapted to be operatively connected to a computer network other than the computer network to which said hub is adapted to be connected for the communication of bursty data between the node and the computer network to which connected, each one of said plurality of nodes comprising:

a remote wireless communication link interface for providing wireless communication with said hub; and

an interface operatively connected to said computer network other than the computer network to which said hub is adapted to be connected;

the improvement comprising a bus structure operatively connected to said first communication signal processor and to said communication controller, wherein said bus structure is adapted to accept plural communication signal processors and operatively connect said plural communication signal processors to said communication controller to thereby provide plural levels of communication capacity between the hub and the plural nodes.

28. A point to multipoint communication system for providing broadband short distance radio communication in the millimeter frequency range between plural remote nodes and a hub including at least one communication signal processor, at least one radio module, and an expandable bus structure for accepting communication signal processors,

wherein said communication system is adapted to provide plural levels of radio communication capacity between the hub and the plural remote nodes by the addition to the hub of equipment selected from the group consisting of:

(a) one or more radio modules;

(b) one or more communication signal processors; and

(c) one or more radio modules and one or more communication signal processors.

29. The communication system of Claim 28 wherein the number of radio modules is greater than the number of communication signal processors.

30. The communication system of Claim 28 wherein said at least one radio module equals four radio modules.

31. The communication system of Claim 30 wherein each of the four radio modules has a 90° azimuthal beamwidth.

32. The communication system of Claim 30 wherein the bandwidth of the radios is selected from the group consisting of: 15°, 30°, 45°, and 60°.

33. The communication system of Claim 28 wherein each of the at least one radio modules operates at the same intermediate frequency.

34. The communication system of Claim 33 wherein at least one of the said at least one radio modules operates at a radio frequency different than the radio frequency at which the others of said at least one radio modules operate.

35. The communication system of Claim 28 wherein said at least one communication signal processor is a modem.

36. The communication system of Claim 35 wherein said modem is a multiport modem.

37. The communication system of Claim 28 wherein said communication signal processors are added to the hub via said expandable bus structure.

38. A communication method for providing point to multipoint wireless communication between a hub and plural remote nodes at plural levels of communication capacity, said communication method comprising:

providing said plural nodes, each comprising:

a remote wireless communication link interface for providing wireless communication with said hub; and

an interface operatively connected to one or more remote computer systems;

providing said hub comprising:

a plurality of wireless communication link interfaces for providing wireless communication with said plural nodes;

a first communication signal processor operatively connected to said plurality of wireless communication link interfaces;

a communication controller operatively connected to an external computer system;

a bus structure operatively connected to said first communication signal processor and to said communication controller;

expanding said bus structure to accept plural communication signal processors and operatively connect said plural communication signal processors to said communication controller to thereby provide plural levels of communication capacity between the hub and the plural nodes.

39. The communication method of Claim 38 further comprising the step of adapting said plurality of wireless communication link interfaces to be interchangeably connected to any one of a plurality of communication signal processors.

40. The communication method of Claim 39 further comprising the step of operatively connecting a second communication signal processor to at least one of the plurality of wireless communication link interfaces and to said bus structure wherein said at least one of the plurality of wireless communication link interfaces is disconnected from said first communication signal processor so as to be connected to said second communication signal processor.

41. The communication method of Claim 40 wherein the addition of said second communication signal processor substantially doubles the communication capacity between the hub and the plural nodes.

42. The communication method of Claim 40 wherein each of the plurality of wireless communication link interfaces establishes a wireless communication link with at least a one of the plural nodes whereby each one of said wireless communication links is substantially independent of the others of said wireless communication links.

43. The communication method of Claim 42 further comprising the step of operating the first and second communication signal processors and each of the plurality of wireless communication link interfaces using a common intermediate frequency.

44. The communication method of Claim 42 further comprising the step of directing the flow of information from the external computer system to certain ones of the plural nodes by selectively controlling the communication controller so as to direct the flow of information to the communication signal processors associated with the wireless communication link between the hub and said certain ones of the plural nodes.

45. The communication method of Claim 44 wherein said external computer is selected from the group consisting of: a public switched telephone network, a private network, a private branch exchange, a router, a fiber optic network, and the internet.

46. The communication method of Claim 38 wherein said first communication signal processor comprises a modem.

47. The communication method of Claim 46 wherein said modem is a multiport modem.

48. The communication method of Claim 46 wherein said modem is capable of providing communications at multiple levels of information density.

49. The communication method of Claim 48 further comprising the step of controlling the level of information density by selectively controlling the communication controller.

50. The communication method of Claim 38 wherein each one of said plurality of wireless communication link interfaces comprises a radio including an antenna with a predetermined beamwidth to provide communications to a predetermined sector.

51. The communication method of Claim 50 further comprising the step of operating said radios using a common intermediate frequency and operating ones of said radios using a radio frequency that is different than the radio frequency of the others of said radios.

52. The communication method of Claim 50 wherein said radios operate in the millimeter frequency range.

53. The communication method of Claim 52 further comprising the step of operating ones of said predetermined sectors using a communication channel that is different than the communication channels of the others of said predetermined sectors wherein said communication channels comprise a forward portion and a reverse portion.

54. The communication method of Claim 53 wherein at least one of the communication channels is a code division multiple access channel.

55. The communication method of Claim 53 wherein at least one of the communication channels is a frequency division multiple access channel.

56. The communication method of Claim 53 wherein at least one of the communication channels is a time division multiple access channel.

57. The communication method of Claim 56 wherein the time division multiple access channel is time division duplexed.

58. The communication method of Claim 57 wherein the time division duplexing is asymmetric.

59. The communication method of Claim 58 further comprising the step of dynamically adjusting said asymmetry as a function of the ratio of the forward portion and the reverse portion of the communication channel.

60. The communication method of Claim 39 further comprising the step of providing a plurality of communication signal processors whereby each one of the plurality of communication signal processors is operatively connected to:

a separate one of said plurality of wireless communication link interfaces; and

the bus structure.

61. The communication method of Claim 60 wherein each of the plurality of wireless communication link interfaces establishes a wireless communication link with at least a one of the plural nodes whereby each one of said wireless communication links is substantially independent of the others of said wireless communication links.

62. The communication method of Claim 61 further comprising the step of providing an additional communication signal processor operatively connected to the bus structure and to a plurality of wireless communication link interfaces to thereby establish a redundant wireless communication link.

63. The communication method of Claim 38 further comprising the step of providing multiple hubs.

64. A method for providing point to multipoint adaptive time division duplex broadband short distance radio communication in the millimeter frequency range between plural remote nodes and a hub, said method comprising the steps of:

providing at least one communication signal processor at the hub;

providing at least one radio module at the hub;

providing an expandable bus structure for accepting communication signal processors at the hub;

adapting said communication system to provide plural levels of radio communication capacity between the hub and the plural remote nodes by the addition to the hub of equipment selected from the group consisting of:

(a) one or more radio modules;

(b) one or more communication signal processors; and

(c) one or more radio modules and one or more communication signal processors.

65. The communication method of Claim 64 wherein the number of radio modules is greater than the number of communication signal processors.

66. The communication method of Claim 64 wherein said at least one radio module equals four radio modules.

67. The communication method of Claim 66 wherein each of the four radio modules has a 90° azimuthal beamwidth.

68. The communication system of Claim 64 wherein the bandwidth of the radios is selected from the group consisting of: 15°, 30°, 45°, and 60°.

69. The communication method of Claim 64 wherein each of the at least one radio modules operates at the same intermediate frequency.

70. The communication method of Claim 69 wherein at least one of the said at least one radio modules operates at a radio frequency different than the radio frequency at which the others of said at least one radio modules operate.

71. The communication method of Claim 64 wherein said at least one communication signal processor is a modem.

72. The communication method of Claim 71 wherein said modem is a multiport modem.

73. The communication method of Claim 64 comprising the additional step of adding said communication signal processors to the hub via said expandable bus structure.